I (WE) CLAIM:

1. A graphics processing unit system for diagnostic medical ultrasound imaging, the system comprising:

a graphics processing unit having an input, at least one of a vertex processor and a fragment processor, and at least one output, the graphics processing unit operable to process first ultrasound data from the input; and

a processor connected with the at least one output, the processor operable to process second ultrasound data output on the at least one output of the graphics processing unit.

2. The system of Claim 1 wherein the graphics processing unit comprises the fragment processor responsive to an output of the vertex processor.

3. The system of Claim 2 wherein the at least one output is downstream from the vertex processor and upstream from the fragment processor.

4. The system of Claim 2 wherein the at least one output is downstream from the vertex processor and the fragment processor.

5. The system of Claim 1 wherein the at least one output comprises at least two outputs, a first one of the at least two outputs connected with the processor and a second one of the at least two outputs connected with a display.

6. The system of Claim 1 wherein the processor comprises an image processor.

7. The system of Claim 1 further comprising an ultrasound data path beginning at a beamformer and ending at a display wherein the graphics processing unit implements at least a part of a first ultrasound process selected

from the group of: receive beamformation, scan conversion, motion detection and combinations thereof and the processor implements at least a part of a second ultrasound process selected from the group of: detection, motion tracking, filtering, scan conversion, and combinations thereof.

8. The system of Claim 2 wherein the vertex processor is operable to perform a scan conversion operation.

9. The system of Claim 2 wherein the fragment processor is operable to perform one of: a Fourier transform and a non-linear scan conversion operation.

10. A method for diagnostic medical ultrasound imaging with a graphic processing unit, the method comprising:

(a) processing first ultrasound data with one of a vertex processor and a fragment processor of a graphics processing unit;

(b) processing second ultrasound data output from the graphics processing unit with a different processor connected to the graphics processing unit prior to generating a display responsive to the first ultrasound data; and

(c) generating a display responsive to the second ultrasound data.

11. The method of Claim 10 wherein (b) comprises image processing the second ultrasound data.

12. The method of Claim 10 wherein (a) comprises performing at least a part of a first ultrasound process selected from the group of: receive beamformation, scan conversion, motion detection and combinations thereof and wherein (b) comprises performing at least a part of a second ultrasound process selected from the group of: detection, motion tracking, filtering, scan conversion, and combinations thereof.

13. The method of Claim 10 wherein (a) comprises performing a scan conversion operation with the vertex processor.

14. The method of Claim 10 where in (a) comprises performing a scan conversion operation with the fragment processor.

15. The method of Claim 10 wherein (a) comprises performing one of: a Fourier transform and a non-linear scan conversion operation with the fragment processor.

16. In a method for loading a video memory of a graphics processing unit where a central processing unit interacts with a second memory and the graphics processing unit, an improvement comprising:

(a) loading data pre-formatted into a format expected by the graphics processing unit into the video memory without storing the data in a cache of the central processing unit.

17. The method of Claim 16 wherein (a) comprises:

(a1) transferring the data to a graphics aperture region of the second memory from a source of data; and

(a2) transferring the data from the graphics aperture region to the video memory without processing of the data by the central processing unit.

18. The method of Claim 17 wherein (a1) comprises writing ultrasound data from a beamformer into the graphics aperture region.

19. The method of Claim 17 further comprising:

(b) sliding the graphics aperture region of the second memory in an address loop.

20. The method of Claim 16 wherein (a) comprises transferring the data to the video memory without storing the data in a graphics aperture region.

21. The method of Claim 16 wherein the central processing unit is operable to run an application programming interface for the graphics processing unit and operable to operate free of copying data between different locations of the second memory for transfer to the video memory, the second memory being a random access memory accessible to the central processing unit through a hub, the video memory connectable to the second memory through an accelerated graphics port of the hub.

22. The method of Claim 16 wherein the data is formatted for the graphics processing unit without processing by the central processing unit.

23. The method of Claim 16 further comprising:

(b) compressing the data prior to (a); and

(c) decompressing the data after (a) with the graphics processing unit.

24. A system for loading a video memory of a graphics processing unit, the system comprising:

a central processing unit connected with the graphics processing unit, the central processing unit operable to run an application programming interface of the graphics processing unit;

a source of data connected with the graphics processing unit;

a first memory connected with the graphics processing unit and the central processing unit; and

a memory control hub connected with the central processing unit, a video memory of the graphics processing unit, the source and the first memory;

wherein data is transferable from the source to the video memory without copying of the data by the central processing unit.

25. The system of Claim 24 wherein the memory control hub is operable to route the data from the source to the video memory through the memory control hub without passing to the central processing unit.

26. The system of Claim 24 wherein the first memory has a graphics aperture region connected with the central processing unit, the data from the source operable to route to the video memory from the source through the graphics aperture region without passing to the central processing unit.

27. The system of Claim 26 wherein the graphics aperture region is operable to slide in an address loop.

28. The system of Claim 26 wherein the memory control hub connects with the graphics processing unit with an accelerated graphics bus, connects with the central processing unit with a host bus, and connects with the second memory with a memory bus.

29. The system of Claim 24 wherein the first memory connects with the central processing unit, the data from the source operable to route to the video memory from the source without passing to the central processing unit and without passing to the first memory, the first memory being a random access memory of the central processing unit.

30. The system of Claim 24 wherein the central processing unit includes a cache memory, the data transferring to the video memory without storing the data in the cache memory.

31. The system of Claim 24 wherein the source of data comprises a medical sensor, the data being medical diagnostic imaging data.

32. The system of Claim 24 wherein the source of data comprises an ultrasound beamformer, the data being ultrasound data.

33. The system of Claim 24 wherein the source of data is operable to format the data for the graphics processing unit without processing by the central processing unit.

34. The system of Claim 24 wherein the data comprises compressed data and the graphic processing unit is operable to decompress the data.